Sky and TELESCOPE

INDEX

To Volume III

This index to Volume III of "Sky and Telescope" has been arranged to be as useful as possible as a reference guide to the issues. Title, author, and subject references will be found. Authors' names are in italics, and major articles are distinguished from subject references by initial capital letters and the inclusion of the author's name in the reference.

In each case the first number given refers to the whole number of the issue; the second number, to the page.

All books which have been reviewed are listed only under the heading, Books and the Sky.

References followed by (ill.) indicate that the material is chiefly or entirely photographic. Other illustrative material needed may be found by referring to major articles on the subject.

Where a major article appears under a subject head, no attempt has been made to index the smaller parts of the subject covered by the article. Many such articles will be found to contain complete discussions.

An index to advertisers is appended.

A

A.A.V.S.O., 25,11; 36,10
  Variable Star Observers Meet, *Eleanor C. Polk*, 25,8
Abbé, Cleveland, 26,4
Abbot, Charles G., 28,9; 30,6; retires, 34,5
Aberration of light, 29,7
Adams, John Quincy (ill.), 26,11
  and Cincinnati Observatory, 26,3
Adler Planetarium, 25,19; (ill.), 26,12; 35,23
Africano, Alfred, book review, 35,16
Aiken, Howard H., 35,15
Airplane Compass, 27,7; (ill.), 27,1
Algol, minima of (current), 25,23; 26,23; 27,23; 28,23; 29,23; 30,20; 35,23; 36,19
Amateur astronomers—Cleveland Star Party, *James L. Russell*, 36,3
Amateur societies—Beaver Co., Pa., 29,11
  Boston, Bond Club, 29,10; 36,10
  Chattanooga, 36,10
  Chicago, 36,10
  Cincinnati, 27,14; 28,15; 29,10; 30,10; 31,7; 32,6; 35,7; 36,10
  Cleveland, 27,14; 28,15; 29,10; 30,10; 31,7; 32,6
  Detroit, A.S., 26,6; 29,10; 30,10; 31,7; 32,6; 35,7; 36,10
  Detroit, Northwest, 33,14
  Duluth, 25,14
  Here and There with Amateurs, 27,20; 30,17; 33,23; 36,22
  Indianapolis, 36,10
  Louisville, 25,14; 26,6
  Madison, 32,6; 36,10
  Milwaukee, 32,6
  New Haven, 25,14; 26,6; 29,10; 30,10
  New York, A.A.A., 25,14; 26,6; 27,14; 28,15; 29,10; 30,10; 31,7; 32,6; 34,11; 35,7; 36,10
  Oakland, 30,11
  Philadelphia, Rittenhouse, 25,14; 26,6; 27,14; 29,10; 30,10; 31,7
  Pittsburgh, 29,11; 31,7
  Port Henry, 29,10
  Portland, Ore., 30,11; 33,14
  Tacoma, 33,14
  Washington, D.C., 25,14; 26,6; 29,10; 30,10; 31,7; 34,11; 35,7
  Yakima, 30,11; 36,10
American Association for the Advancement of Science, 35,15
American Astronomical Society, 25,10; 25,11; 31,15; 32,14
  71st meeting (Cincinnati), 26,10
  72nd meeting (Philadelphia), 34,12; papers from, 35,12
American Meteor Society, 25,10; 34,12
American Philosophical Society, 34,12; 34,17
American Rocket Society, 35,4
Anagrams, astronomical, 35,11
Andromeda nebula—color studies, 28,8
  polarized light from, 32,5
Anderson, Wilmer C., and experiments on velocity of light, 29,9
Apollonius of Perga, 30,11
Aristarchus of Samos, 29,11
Aristotelian Cosmology or A Romance of Manhattan, *Joseph R. Habes, S.J.*, 36,6
Asteroids—Historical, *W. P. Hirst*, 33,3
  Mnemosyne orbit, 35,14
  names, 36,7
  Observation of the Minor Planets, The, *H. E. Wood*, 33,4
  Orbits of the Minor Planets, The, *J. Jackson*, 34,9
  Trojan Group, The, *H. E. Krumm*, 34,9
Astronomers (poem), *Stanton A. Coblentz*, 34,12
Astronomical Anecdotes, *R.K.M.*
  Ancient Joke, An, The Lunar Sky, and Moon Observations, 27,6
  Asteroid Names and Questionable Nomenclature, 36,7
  Astronomers as Conjurers, and Extracts from a Diary, 30,19
  Daytime Comets, A Portrait Lens, and Three Tons of Star Map, 25,17
  "Glorious Eighth," The, Rittenhouse, and Cracked Bells, 34,17
  Newton, Blacklock, and a New Large Telescope, 31,6
  Occultations, Telegraph, and Big Telescope, 33,7
  "Planets," "Arnold," and Soviet Telescopes, 32,19
  Salad, A, Some Anagrams, and a Tercentenary, 35,11
  Some Delayed Telescopes, and a Single Student, 28,4
  Star of Bethlehem? 26,15
  Sunspots and Dinners and Solar Flares, 29,14
"Astronomical Journal," 26,4
Astronomical photography, see Photography
Astronomical poems, see Poems
Astronomy—for armed forces, 32,14
  history, Man and His Expanding Universe, *Percy W. Witherell*, I, 26,14; II, 27,15; III, 28,20; IV, 29,11; V, 30,11; VI, 31,14; VII, 32,11; VIII, 33,15; IX, 34,22; X, 35,21; XI, 36,11
  in the army, 26,20
  in Russia, 26,9
  paper on progress in, 28,14
  publications, teaching, and research, 32,14
  textbooks, 31,2
Atmosphere, 28,13
Atmosphere—*continued*
  radiation near 10000 A., 28,8
  Telluric Oxygen Bands, The, *Keivin Burns*, 30,8
Atom smashers, 33,11
Atomic particles, The Nature of Cosmic Rays, *W. F. G. Swann*, I, 31,3; II, 32,7; III, 33,8; IV, 34,6
Atwood celestial sphere, 25,5
Auriga, 27,5
Aurorae—and comet observations, 32,11
  and telegraph disturbances, 33,7
  in March, 31,15

B

Back-cover photographs, see Photographs
Baird, George D., A Pivotal Star, 29,20
Barlow lens, 31,16
Barney, Ida, 35,14
Bartol Research Foundation (ill.), 33,8
Barton, William Henry, Jr., 34,2
  Interpreter of the Heavens, *Wayne M. Faunce*, 35,5
Barton, William H., Jr., book review, 29,17
  Facts Collected for a Trip to the Moon, 25,6
  Our Planetary Neighbors, 29,4
  Stars of a Winter Night, 27,5
  This Earth of Ours, 28,12
Barton, Samuel G., Navigation Star Pronunciations, 29,20
Bausch, Edward, 36,8
Beehive and the Moon, The, *Jesse A. Fitzpatrick*, 30,20
Beginner's Page, *Percy W. Witherell*, all issues; see under author for titles
Belville, Elizabeth Ruth, 32,19
Betatron, 33,11
Bidelman, William, 27,11
Binary stars, see Double stars
Birkhoff, George D., 31,15
Blacklock, A. Woolsey, 31,9
Blink microscope, 33,5
Bobrovnikoff, N.T., 28,9
Bode's law, 33,3
Bok, John, book review, 27,17
Bolides, see Meteors
Bond, G.P., 33,7
Books and the Sky
  Aircraft Navigation, Stewart, Nichols, Walling and Hill, *C.A.F.*, 25,16
  Astronomical Tables of the Maya, The, Maud Worcester Makemson, *Edgar W. Woolard*, 26,18
  Basic Marine Navigation, Bok and Wright, *Freeman D. Miller*, 34,14

Books and the Sky—*continued*
Beloved Scientist, David O. Woodbury, *Leon Campbell*, 30,14
Calendar for Everybody, The, Elisabeth Achelis, *R. Newton Mayall*, 30,15
Contribution of Holland to the Sciences, The, edited by Barnouw and Landheer, *Dorrit Hoffleit*, 31,18
Electronic Physics, Hector, Lein, and Scouten, *Harold F. Weaver*, 36,14
Fogs, Clouds and Aviation, W. J. Humphreys, *C. Chapman*, 31,19
Forward with Science, Rogers D. Rusk, *R. Newton Mayall*, 36,15
Galaxies, Harlow Shapley, *Roy K. Marshall*, 27,16
Introduction to Navigation and Nautical Astronomy, An, Shute, Shirk, Porter, and Hemenway, *Fitz-Hugh Marshall, Jr.*, 33,17
Introductory Astronomy, J. B. Sidgwick, *Jane S. Davis*, 35,16
Knowing the Weather, T. Morris Longstreth, *C. Chapman*, 28,17
Learning to Navigate, Weems and Eberle, *Fitz-Hugh Marshall, Jr.*, 33,17
Life on Mars, Donald Lee Cyr, *Edward B. Burke*, 36,14
Marine and Air Navigation, Stewart and Pierce, *J. J. Nassau*, 33,16
Mr. Tompkins Explores the Atom, G. Gamow, *Laurence J. Lafleur*, 32,16
Navigation, Kells, Kern, and Bland, *William H. Barton, Jr.*, 29,17
"Particles" of Modern Physics, The, J. D. Stranathan, *Philipp Frank*, 31,19
Rockets, Willy Ley, *Alfred Africano*, 35,16
Science at War, George W. Gray, *Richard C. Lord*, 35,17
Solar Relations to Weather, Henry Helm Clayton, *Robert E. Cox*, 28,16
Spherographical Navigation, Brouwer, Keator, and McMillen, *E. G. Ebbighausen*, 32,17
Star Finder, The, Henry M. Neely, *Fred M. Garland*, 27,16
Start in Meteorology, A, Armand N. Spitz, *John Bok*, 27,17
Tomorrow We Fly, Stout and Reck, *Maude Squire Rufus*, 32,17
Treasury of Science, A, edited by Shapley, Rapport, and Wright, *Marian Lockwood*, 29,16
Weather Around the World, Ivan Ray Tannehill, *C. Chapman*, 29,17
World Wide Planisphere, William H. Barton, Jr., *C.A.F.*, 34,15
Bosque Alegre Observatory, 28,4
Bowerman, Walter G., Sunspots in Review, 35,8
Bradley, James, 33,15
and experiments on velocity of light, 29,7
Brinkley, John, 28,15
British Astronomical Association, 32,15
Brouwer, Dirk, 28,20
Brown, Earle B., Eyepiece Problem, The, 28,18; correction, 31,17
Improving the Reflector, 30,18; 31,16
Notes on Mountings, 26,16
Schwarzschild Telescope, The, 27,18; correction, 28,19
Brunner-Hagger, 32,11
Brünnow, Francis, 33,7
Buhl Planetarium, 25,19; (ill.), 26,12
Planetarium Notes, all issues
Burke, Edward B., book review, 36,14
Burnham, S.W., From Back-yard Astronomy to the Annals of Fame, *Clarence R. Smith*, 31,10
Burns, Keivin, The Telluric Oxygen Bands, 30,8

C

C.A.F., book reviews, 25,16; 34,15
Calculating machine at Harvard, 35,15
Calendar—determination of early dates, 27,15
longest and shortest days, 26,5
Campbell, Leon, book review, 30,14
Mira maximum, 30,21
Capitalization of astronomical words, 36,7
Carlson Planetarium, 33,2
"Carte du Ciel," 25,17
Cassini, 32,11
Cassiopeia, 36,12
Catalogues of double stars, 31,11
Cecil, Francis D., The St. Mary's Meteorite of 1919, 36,9
Celestial globes, 25,4
Celestial navigation, see Navigation
Cepheid variables, see Variable stars
Cepheus, 36,12
Cesco, Carlos U., 35,14
Challenge of the Rainbow, The, *W. Carl Rufus*, 30,12
Chandrasekhar, S., 35,13
Chant medal award, 35,7
Chapman, C., book reviews, 28,17; 29,17; 31,19
Christmas star, see Star of Bethlehem
Cincinnati Observatory (ill.), 26,1
A.A.S. meeting at, 26,10
One Hundred Years at the Cincinnati Observatory, *Everett I. Yowell*, 26,3
Clark, George Bassett and Alvan, 34,17
Cleveland Star Party, *James L. Russell*, 36,3; (ill.), 36,1
Clouds, see Meteorology
Coblentz, Stanton A., Astronomers (poem), 34,12
Comet(s)—Brooks (ill.), 31,24
Comets and Meteors, *Marian Lockwood*, 31,12
d'Arrest, 26,9
Diamaca, 25,11; 26,9
Donohoe comet medal awards, 32,6
du Toit, 33,6
early photography of, 25,17
1882, 25,17
Encke, 29,15; 31,13; 31,23
Halley, 31,12
periodic, predicted for 1944, 29,15
Schaumasse, 29,15; 31,15
tails and earth's magnetic field, 33,6
van Gent (1944), 33,6
van Gent-Peltier (1943), 27,11; Comet van Gent-Peltier, *G. Van Biesbroeck*, 28,11
Whipple (1942g), 28,9; 32,11
Compass, see Navigation
Conjunction-occultation of 80 Virginis, 32,20
Constellations—charts, all issues; southern, 34,21; 36,21
Skies of Autumn, *Marian Lockwood*, 36,12
Stars of a Winter Night, *William H. Barton, Jr.*, 27,5
Stars of Spring, *Marian Lockwood*, 30,3
Stars Tell a Secret? The, *L. S. Copeland*, 33,14
Summer Stars, *Marian Lockwood*, 33,12
see also individual constellations
Copeland, L. S., Deep-sky Wonders, 30 through 36
Far-Sprinkled Systems, The, 29,12
Stars Tell a Secret? The, 33,14
Copernicus, 29,10; 31,14
Cordoba Observatory, see Bosque Alegre Observatory
Corwin, Norman, 32,19
Cosmic rays, The Nature of Cosmic Rays, *W.F.G. Swann*, I, 31,3; II, 32,7; III, 33,8; IV, 34,6
Cosmology, Aristotelian Cosmology or A Romance of Manhattan, *Joseph R. Habes, S.J.*, 36,6
Cox, Robert E., 32,2
Cox, Robert E., book review, 28,16
Cross-axis telescope mounting, 26,17
Cyclotron, 33,11

D

Davis, Jane S., book review, 35,16
Dawson, Bernhard H., 25,20; 27,14
Dearborn Observatory, 31,10
Declaration of Independence, 34,17
Deep-sky Wonders, all issues; by *L. S. Copeland*, 30 through 36
Delta Cephei, 28,7
De Morgan, Augustus, 30,19
Diffraction cross on star images, 26,5
Dilution effect, 36,8
Doppler effect, 29,4.
Double Cluster in Perseus, 27,11; proper motion in, 36,8
Double stars—Algol, see Algol
AR Cassiopeiae, 28,10
at Lamont-Hussey, 34,5
From Back-yard Astronomy to the Annals of Fame—Burnham, *Clarence R. Smith*, 31,10
irregular-variable, 35,15
RX Cassiopeiae, 35,14
SX Cassiopeiae, 35,14; 36,8
U Cephei, 36,8
white-red dwarf system, 36,8
see also Stars
Dunsink Observatory of Trinity College, 28,15
Durham, J., Eclipse in January 55 Years Ago, *J. Hugh Pruett*, 27,3

E

Earth—effect on if sun became nova, 34,13
interior, 28,13
international latitude survey, 35,15
magnetic field, 32,9; 33,8; 34,7
Our Earthly Flight (poem), *W. Carl Rufus*, 28,12
This Earth of Ours, *William H. Barton, Jr.*, 28,12
Ebbighausen, E. G., book review, 32,17
Eclipses, see Sun and Moon
Eclipsing stars, see Double stars and Stars
Editors Note, The, 25 through 33
Edmondson, Frank K., 28,10
Edmondson, Frank K., and *Loraze B. Taylor*, American Astronomers Meet, 26,10
Egyptian astronomy, 26,14; 27,15; 29,11
Electron, 31,5; 32,7; 33,8; 34,6
Elmer, Charles W., 25,20
Ensor, G. E., 25,8
Epsilon Orionis, A Pivotal Star, *George D. Baird*, 29,20
Equation of time, see Time
Eratosthenes, 29,11
Eros, 32,15
Eudoxus of Cnidus, 29,11; 30,11
Explorer II, see Stratosphere flights
Exploring the Heavens with a 2-Inch Telescope, *Lester Sussman*, 34,11
Extragalactic nebulae, see Galaxies
Eyepieces, see Telescope making and Telescopes

F

Far-Sprinkled Systems, The, *L. S. Copeland*, 29,12
Faunce, Wayne M., Interpreter of the Heavens, 35,5
Fedynsky, V. V., 28,14
Fels Planetarium, 25,3; 25,19; (ill.), 26,12
Astronomy Clinic, 28,2
projector (ill.), 25,1
Fessenkoff, V. G., 36,8
Fireballs, see Meteors
Fitzpatrick, Jesse A., Beehive and the Moon, The, 30,20
Color Contrasts in Neighboring Stars, 29,22
Favorable and Unfavorable Elongations of Mercury, 34,18
Jupiter and the Lunar Atmosphere, 33,20
Jupiter at Opposition, 28,22
Mars Returns to the Evening Sky, 25,22
Occultation of Jupiter, An, 27,22

Astron. Obs.
Fazon

Fitzpatrick, Jesse A.—*continued*
Remarkable Transits of Jovian Satellites I and II, 31,22
Saturn, Its Rings and Its Satellites, 26,22
Variation of Saturn's Perihelion, 35,22
Fizeau, and experiments on velocity of light, 29,8
Flamsteed, and astrology, 30,19
Fork type telescope mounting, 26,17
Foster, J. Foster, Lunar Crater Theories, 25,12
Foucault, and experiments on velocity of light, 29,8
Fox, Philip, retires, 25,11
Philip Fox, *Carol Anger Rieke*, 35,2
Frank, Philipp, book review, 31,19
Franklin-Adams star camera, 33,4
Franklin Institute, The, 25,4
Fraunhofer lines, 30,8

G

Galactic clusters, see Star clusters
Galactic nebulae, see Nebulae
Galactocentric System, The, *Peter van de Kamp*, 32,3
Galaxies—age of clusters, 29,15
edge-on in Andromeda, NGC 891 (ill.), 30,24
Far-Sprinkled Systems, The, *L. S. Copeland*, 29,12
local system, 29,12
Milky Way, see Milky Way
tables of galaxies for amateur observation, 29,12; 29,13
Galileo, 31,14
anagrams, 35,11
experiments on velocity of light, 29,7
Gamow, George, 30,6
Gaposchkin, Sergei, 35,14
Garland, Fred M., book review, 27,16
Gaviola, Enrique, 28,4
German type telescope mounting, 26,16
Glasgow B.A.A. jubilee, 34,5
Gleanings for A.T.M.s, edited by *Earle B. Brown*, all issues; see under editor, authors, or subjects for titles
Globular clusters, 36,11
Goedicke, Victor, 31,2
Gouvy, Gertrude, Immortality (poem), 30,6
Graphic Time Table of the Heavens—1944, 27,12
Graton, L. C., Mexican Volcano, 28,3
Gravitation, 27,17
new theory of, 31,15
Great Loop nebula, 36,2; (ill.), 36,24
Greenwich Observatory, 32,15
and moon observations, 27,6
Griffin, George R., 25,8
Griffith Planetarium, 25,19; (ill.), 26,13
Gyro Flux Gate Compass, 27,7; (ill.), 27,1

H

h Persei proper motion, 36,8
Habes, Joseph R., S.J., Aristotelian Cosmology or A Romance of Manhattan, 36,6
Halley, Edmond, 33,15
Hargreaves, F. J., quotations from article on telescope, 30,18; 31,16
Haro, Guillermo, 34,13; 35,12
Harvard Observatory southern station, 26,9
Harvard University calculating machine, 35,15
Hayden Planetarium, 25,4; 25,19; (ill.), 26,13
Planetarium Notes, all issues
Height of eye, 28,12
Helium atoms and cosmic rays, 34,7
Here and There with Amateurs, 27,20; 30,17; 33,23; 36,22
Herschel, William, 33,15
Hevelius, 32,11
Hipparchus, 30,11
Hirst, W. P., The Asteroids—Historical, 33,3
History of astronomy, see Astronomy
Hoffleit, Dorrit, book review, 31,18
News Notes, all issues
South African Astronomy, 35,2
Hogg, Helen Sawyer, 35,12
Hough, G. W., 33,7
Huygens, Christian, 32,11; 35,11
Huygens eyepiece, 28,18; correction, 31,17

I

Immortality (poem), *Gertrude Gouvy*, 30,6
Influenza mortality and temperature, 35,8
In Focus—Centaurus and Crux, 34,2
inversion of lunar features, 26,8; 27,19; 28,2; 29,19
lunar features, 27,19; 28,2; 29,19; 34,2
Scorpius and the Milky Way, 33,2
Tarantula (Great Loop) nebula, 36,2
International Business Machines calculator, 35,15
Interpreter of the Heavens, *Wayne M. Faunce*, 35,5
Inversion in photographs, see Moon

J

Jackson, J., The Orbits of the Minor Planets, 34,9
Jaggar, T. A., 33,6
Jenkins, Louise F., 28,20
Jewett, James R., 25,8
Jones, H. Spencer, 32,15
Jupiter—atmosphere, 29,6; 29,15
daytime observation, 34,19
Jupiter and the Lunar Atmosphere, *Jesse A. Fitzpatrick*, 33,20
Jupiter at Opposition, *Jesse A. Fitzpatrick*, 28,22
occultation, 1860, observed by Bond, 33,7
occultation, Jan. 13, 1944, Occultation of Jupiter, An, *Jesse A. Fitzpatrick*, 27,22; (ill.), 28,2; 29,2
occultation, Apr. 30, 1944, 32,21; 33,7
occultation by a satellite, 33,7
Remarkable Transits of Jovian Satellites I and II, *Jesse A. Fitzpatrick*, 31,22
satellites (current diagrams), 25 through 32
satellites, used to determine velocity of light, 29,7
see also Planets

K

Kapteyn, J. C., 32,4
Karolus, and experiments on velocity of light, 29,9
Kellner eyepiece, 28,19
Kepler, 31,14; 35,11
and Star of Bethlehem, 26,15
Knapp, Joseph, Meteorite (poem), 25,10
Korsmeyer, R.B., Foucault Test for a Schwarzschild, 29,18
Kovalenko scholarship in astronomy, 30,6
Krumm, H. E., The Asteroids—The Trojan Group, 34,9
Kuiper, Gerard P., 29,15

L

Lafleur, Laurence J., book review, 32,16
Sauce for the Gander, 26,5; 27,17
Lamont-Hussey Observatory, 34,5
Land, Gustav, 28,11; 35,14
Langley, Samuel Pierpont, 30,19
Latitude—effect in cosmic rays, (ill.), 32,9; 32,10
survey, 26,5; international, 35,15
Law of Diminishing Returns, The, *Joel Stebbins*, 28,5
Leander McCormick Observatory, 35,15
Legion of Merit, 34,5
Lembang Observatory, 27,11
Leo, 30,5
LeVine, Harry, A Trainer for Celestial Navigation, 36,5
Levitt, I. M., Philadelphia Meeting, 34,12
Liberty ships, see S.S.
Light—Notes on the Velocity of Light, *Duncan Macdonald*, 29,7
table of leading determinations of velocity, 29,9
Lindblad, Bertil, 32,4
Link trainer—A Trainer for Celestial Navigation, *Harry LeVine*, 36,5
Lockwood, Marian, book review, 29,16
Comets and Meteors, 31,12
Skies of Autumn, 36,12
Stars of Spring, 30,3
Summer Stars, 33,12
Sun and Eclipses, The, 32,12
Trip to the Moon, A, 34,3
Wise Men's Star, The, 26,7
Lomb, Henry, S.S., 25,11
Longest day, 26,5
Longitude determinations, early, 33,7
Lord, Richard C., book review, 35,17
Lutz, G. H., Metal Mirrors, 25,18
Luyten, W. J., 26,11; 36,8

M

Macdonald, Duncan, Notes on the Velocity of Light, 29,7
Magnetism, 27,17
Man and His Expanding Universe, *Percy W. Witherell*, I, 26,14; II, 27,15; III, 28,20; IV, 29,11; V, 30,11; VI, 31,14; VII, 32,11; VIII, 33,15; IX, 34,22; X, 35,21; XI, 36,11
Maris, H. B., 33,6
Mars—in Praesepe, 32,20
Mars Returns to the Evening Sky, *Jesse A. Fitzpatrick*, 25,22
period of rotation, 29,4
Seasonal Changes on Mars, *Latimer J. Wilson*, 28,15
see also Planets
Marshall, Fitz-Hugh, Jr., book reviews, 33,17
Marshall, Roy K., book review, 27,16
The Planetarium, I, 25,3; II, 26,12; III, 27,8
Maryland Academy of Sciences, 36,9
Graphic Time Table of the Heavens—1944, 27,12
Mattes, Max H., Rotating Telescope Mount, 25,18
Mayall, R. Newton, book reviews, 30,15; 36,15
McIntosh, R. A., 28,14
McLaughlin, Dean B., 34,13
McMath-Hulbert Observatory, 34,5
Mercier, and experiments on velocity of light, 29,9
Mercury, 29,4
Favorable and Unfavorable Elongations of Mercury, *Jesse A. Fitzpatrick*, 34,18
observation, 32,21
occultation, July 21, 1944, 36,18
see also Planets
Mesotron, 32,8; 33,9; 34,7
Messier's catalogue, 36,11
Meteor Crater, 25,12
Meteorite(s), 31,13
exhibition in Moscow, 36,4
Leedey, Okla., fall, 27,22
Meteorite (poem), *Joseph Knapp*, 25,10
new find, 29,15
St. Mary's Meteorite of 1919, The, *Francis D. Cecil*, 36,9
Meteorology—altocumulus clouds (ill.), 30,1
and astronomy, 25,2
early work, 26,4
long-range forecasting, 28,9; 30,6

Meteors—bolide in Cygnus (ill.), 25,24
Comets and Meteors, *Marian Lockwood*, 31,12
daytime fireball, Aug. 18, 1944, 36,19
Geminids, 26,23
How Fireballs Should Be Observed, *Charles P. Olivier*, 25,9
Leonids, 25,23
Perseids, 34,19; 36,18
recent investigations, 30,6
Texas Meteor Cloud, May 20, 1944, *Oscar E. Monnig*, 35,3; (ill.), 35,1
with trains, 28,14
Meton, 29,11
Mexican award to Harlow Shapley, 36,8
Mexican Eclipse Expedition, *Felix Recillas J.*, 31,8
Mexican Volcano, *L. C. Graton*, 28,3; (ill.), 28,1
Michelson, A. A., and experiments on velocity of light, 29,8
Michigan observatories, 34,5
Milky Way, 28,14; 31,15; 35,21
Galactocentric System, The, *Peter van de Kamp*, 32,3
in Centaurus and Crux, 34,2; (ill.), 34,24
in Scorpius (ill.), 33,24
Miller, Freeman D., book review, 34,14
Minor planets, see Asteroids
Mira maximum, 30,21
Mitchel, Ormsby MacKnight, 26,3
Mitchell, S. A., retires, 35,15
Mittelstaedt, and experiments on velocity of light, 29,9
Monnig, Oscar E., Texas Meteor Cloud, May 20, 1944, 35,3
Moon—Alps and Plato, 29,19; (ill.), 29,24
and Greenwich Observatory, 27,6
and radio reception, 33,7
Archimedes region, 27,19; (ill.), 27,24
atmosphere—Jupiter and the Lunar Atmosphere, *Jesse A. Fitzpatrick*, 33,20; 36,8
Beehive and the Moon, The, *Jesse A. Fitzpatrick*, 30,20
charts of positions (current), all issues
conjunction-occultation of star 60 Virginis, 32,20
Copernicus region, 28,2; (ill.), 28,24
eclipse, partial, Aug. 15-16, 1943, 30,2
eclipses and earth's upper atmosphere, 27,11
Facts Collected for a Trip to the Moon, *William H. Barton, Jr.*, 25,6
features (In Focus), 27,19; 28,2; 29,19; 34,2
Graphic Time Table of the Heavens—1944, 27,12
inversion of features, 26,8; 27,19; 28,2; 29,19
librations, 34,4
Lunar Crater Theories, *J. Foster Foster*, 25,12
occultations, Jupiter, see Jupiter; Mercury, July 21, 1944, 36,18; tables (current), all issues; for Texas (current), all issues but 25 and 26
phases of (current), all issues
rays, 25,12
southern portion, (ill.), 34,1; 34,2
stars visible on, 27,6
Trip to the Moon, A, *Marian Lockwood*, 34,3
Tycho and Clavius (ill.), 26,24
Morgan, W. W., 28,9; 28,10
Morse Observatory, 35,7
Moscow—meteorite exhibition, 36,4
news from, 30,7
Mountings, see Telescopes
Museum of Science and Industry, 35,23

N

Nassau, J.J., book review, 33,16
Nature of Cosmic Rays, The, *W.F.G. Swann*, I, 31,3; II, 32,7; III, 33,8; IV, 34,6
Navigation—Airplane Compass, (ill.), 27,1; 27,7
early methods, 28,20; 31,14
Navigation Star Pronunciations, *Samuel G. Barton*, 29,20
new celestial device, 33,6
Trainer for Celestial Navigation, A, *Harry LeVine*, 36,5
Nebulae—extragalactic, see Galaxies
Larger Network nebula (ill.), 32,24
planetary, see Planetary nebulae
Tarantula (Great Loop), 36,2; (ill.), 36,24
Negative electron, see Electron
Neptune—conjunction with Eta Virginis, 26,20
discovery of, 34,22
path of (current), 28,22
see also Planets
Neutrino, 31,6; 32,9
Neutron, 31,6; 32,8; 33,9
New School for Social Research, 35,15
News from Moscow, 30,7
News Notes, *Dorrit Hoffleit*, all issues; see under topics and people for references
Newton, Isaac, 31,6; 32,11; 33,15
Nininger, H. H., 29,15
Nomenclature in astronomy, 36,7
Nova(e)—Aquilae 1943, 25,11
medal received by B. H. Dawson, 27,14
Persei nebulosity, 28,5
Pictoris 1925, 29,15
Tycho's star, 36,12

O

Objective prism, 32,11
Observer's Page, *Jesse A. Fitzpatrick*, all
Observer's Page, *Jesse A. Fitzpatrick*, all issues; see under author and subjects for titles
Occultations, see Moon
Oculars, see Telescope making and Telescopes
Ohman, Yngve, 32,5
Olivier, Charles P., 34,12
Olivier, Charles P., How Fireballs Should Be Observed, 25,9
Oort, J. H., 32,4
Orion, 27,5
nebula, 28,9; 28,10
Orreries, early, 25,3
Our Earthly Flight (poem), *W. Carl Rufus*, 28,12

P

Pacific islands, early astronomy in, 28,20
Parallax, see Stellar parallax
Paraskevopoulos, J. S., 29,15
Paricutin volcano, (ill.), 28,1; 32,10
Mexican Volcano, *L. C. Graton*, 28,3
Pearce, J. A., 35,12
Perseus, Double Cluster in, 27,11; 36,8
Peterson, George F., A Film Substitute, 30,18
Petrie, R. M., 28,10; 35,14
Pettit, Edison, 25,11
Pettit, Helen B., The Rotation Period of Saturn, 32,15; correction, 34,10
Philadelphia Meeting, *I. M. Levitt*, 34,12
Photographs on back covers—
bolide in Cygnus, 25,24
Brooks' comet, 31,24
Larger Network nebula, 32,24
moon, Alps and Plato, 29,24; Archimedes region, 27,24; Copernicus region, 28,24; Tycho and Clavius, 26,24
Scorpius and the Milky Way, 33,24
southern Milky Way in Centaurus and Crux, 34,24
spiral in Andromeda, NGC 891, 30,24
sunspots, 35,24
Tarantula (Great Loop) nebula, 36,24
Photography—at Harvard's southern station, 26,9
early, 25,17; 34,22
film substitute, 30,18
Photography—*continued*
number of stars seen visually and photographically, 35,19
recent developments, 34,12
reciprocity law, 28,5
Photon, 31,6; 32,7; 33,8
Piazzi, Giuseppe, 33,15
Pickering, William H., and eclipse, Jan. 1, 1889, 27,3
and Jupiter occultation, 1892, 33,20
Pitch lap, see Telescope making
Pivotal Star, A, *George D. Baird*, 29,20
Planetarium, The, *Roy K. Marshall*, I, 25,3; II, 26,12; III, 27,8
Planetarium(s)—and wartime education, 28,2
list of, 25,5
Planetarium Notes, all issues
projector, (ill.), 25,1; 26,12; 27,8
see also individual planetariums
Planetary nebulae and Wolf-Rayet stars, 30,6
Planets—current positions, all issues
Graphic Time Table of the Heavens—1944, 27,12
invisible companions in other systems, see Stars
Our Planetary Neighbors, *William H. Barton, Jr.*, 29,4
see also individual planets and Solar system
Pleiades studies, 35,12
Pluto—current positions, 31,23; 36,19
see also Planets
Poems—Astronomers, *Stanton A. Coblentz*, 34,12
Immortality, *Gertrude Gouvy*, 30,6
Meteorite, *Joseph Knapp*, 25,10
Our Earthly Flight, *W. Carl Rufus*, 28,12
Polarized light—studies of lunar atmosphere, 36,8
studies of M31, 32,5
Polk, Eleanor C., Variable Star Observers Meet, 25,8
Polynesian astronomy, 28,20
Pons and comet discoveries, 30,19
Porter, Jermain G., 26,5
Positron, 31,6
Pulkovo Observatory, 30,7
Praesepe—Beehive and the Moon, The, *Jesse A. Fitzpatrick*, 30,20
Mars in, 32,20
Priest, H. Malcolm, Conjunction of Neptune and Eta Virginis, 26,20
Primum mobile, 36,6
Proper motion, see Stars
Proton, 31,5; 32,9; 33,10
Pruett, J. Hugh, Eclipse in January 55 Years Ago, 27,3
Efficient But Low-cost Telescope Drive, An, 32,18
Simple Setting Circles for Amateur Telescopes, 34,16
Testing the Focal Lengths of Telescopic Oculars, 36,16
Ptolemy, 30,11
Pythagoras, 29,11

Q

Questionable nomenclature in astronomy, 36,7
Quiller-Couch, Sir Arthur, 33,7

R

Radio—amateurs and astronomy, 27,2
"Odyssey of Runyan Jones, The," 32,19
science programs, 28,14
Radioactivity, 32,8
Rainbow—The Challenge of the Rainbow, *W. Carl Rufus*, 30,12
Ramsden eyepiece, 28,18
Recillas J., Felix, Mexican Eclipse Expedition, 31,8
Reciprocity law in photography, 28,5
Rho Ophiuchi (ill.), 33,13

Rieke, Carol Anger, Philip Fox, 35,2
Rittenhouse, David, 34,17
R.K.M., Astronomical Anecdotes, all issues, see Astronomical Anecdotes for titles
Roemer, Ole, and experiments on velocity of light, 29,7; 35,11
Rosseland, S., 27,11
Rotation effect in spectra, 36,8
Royal Astronomical Society of Canada, 35,7
Rufus, Maude Squire, book review, 32,17
Rufus, W. Carl, Challenge of the Rainbow, The, 30,12; correction, 31,9
Our Earthly Flight (poem), 28,12
Russell, James L., Cleveland Star Party, 36,3
Russian astronomy, 26,9; 30,7

S

Sagittarius, 33,12
Sahade, Jorge, 35,14
St. Mary's Meteorite of 1919, The, *Francis D. Cecil,* 36,9
Satellites, historical, 34,22
Saturn—ring system, 29,6
Rotation Period of Saturn, The, *Helen B. Pettit,* 32,15; correction, 34,10
Saturn, Its Rings and Its Satellites, *Jesse A. Fitzpatrick,* 26,22
Titan's atmosphere, 29,15
Variation of Saturn's Perihelion, *Jesse A. Fitzpatrick,* 35,22
see also Planets
Sauce for the Gander, *L. J. Lafleur,* 26,5; 27,17
Schlesinger, Frank, 27,11
Schoenberg, E., 29,15
Schwarzschild, Martin, awarded Legion of Merit, 34,5
Schwarzschild telescope, see Telescope making
Scorpius, 33,12; and the Milky Way, 33,2; (ill.), 33,24
Scottish Branch, B.A.A., jubilee, 34,5
Setting circles, see Telescope making
Shapley, Harlow, 26,10; 28,14; 32,4; 36,8
Shearing effect, 32,3
Shortest day, 26,5
"Sidereal Messenger," 26,4
Smiley, Charles H., discussion of Schwarzschild telescope, 27,18; correction, 28,19
Smith, Clarence R., From Back-yard Astronomy to the Annals of Fame—Burnham, 31,10
Solar system—motions in, 32,3
new theory of origin, 30,7
see also Planets
South African astronomy, 35,2
Southern star charts, 34,21; 36,21
Spectra and spectroscopy—
Challenge of the Rainbow, The, *W. Carl Rufus,* 30,12
dilution effect, 36,8
Einstein shift, 28,10
industrial spectrography, 34,12
interstellar reddening, 28,9
negative ions, 35,13
rotation effect, 36,8
Rotation Period of Saturn, The, *Helen B. Pettit,* 32,15; correction, 34,10
Spectra, V, *Percy W. Witherell,* 25,15
Telluric Oxygen Bands, The, *Keivin Burns,* 30,8
Warner and Swasey objective prism, 32,11
see also Stars and Double stars
Spitz, Armand N., Exhibition of Stephens Paintings, 27,14
S.S. Henry Lomb, 25,11
Star clusters—Double Cluster in Perseus, 27,11
Pleiades, 35,12
Star of Bethlehem, 26,15
Wise Men's Star, The, *Marian Lockwood,* 26,7
Stars—
AR Cassiopeiae, 28,10
AR Herculis variable period, 28,10
AR Monocerotis, 35,14
Stars—*continued*
BD Virginis, 35,14
clusters, see Star clusters
Color Contrasts in Neighboring Stars, *Jesse A. Fitzpatrick,* 29,22
diffraction crosses on photographic images, 26,5
double, see also Double stars
evolution of, 30,6
faint star BD +4° 4048, 29,15
48 Librae, 26,9
helium stars' rapid rotation, 28,10
invisible companions ("planets"), 26,11; 32,14; correction, 33,6; 32,19
irregular-variable double stars, 35,15
maps, all issues; southern, 34,21; 36,21
Navigation Star Pronunciations, *Samuel G. Barton,* 29,20
novae, see Novae
O-type stars, 35,14
parallax, see Stellar parallax
photometry—Law of Diminishing Returns, The, *Joel Stebbins,* 28,5
Pleiades, 35,12
proper motion, 26,11; of h Persei, 36,8; work at Cincinnati, 26,5
radial velocities of *A* and *K* stars, 28,10
red photography, 28,5
red stars, 35,12
reflection rings on photographic images, 26,5
70 Ophiuchi, 32,19
sizes of, in two colors, 35,14
spectra, see also Spectra and spectroscopy
Stars of a Winter Night, *William H. Barton, Jr.,* 27,5
Stars of Spring, *Marian Lockwood,* 30,3
Trapezium stars, 28,10
variable, see also Variable stars
white-red dwarf double, 36,8
Stebbins, Joel, 26,11
Stebbins, Joel, The Law of Diminishing Returns, 28,5
Stellar parallax, 28,6; 35,21
early work, 32,19
errors of plates, 28,11
Struve 2398, 28,20
Stephens, D. Owen, paintings exhibited, 27,14
Stereocomparator, 33,5
Stetson, Harlan T., 33,7
Stone, Ormond, 26,4
Stoy, R. H., 35,2
Stratosphere flights, 31,3; (ill.), 32,1; 32,10; 34,6
Stroemberg, Gustav, 32,4
Struve, Otto, 28,10; 31,15; 36,8
Sun—as a nova, 34,13
corona observations, early, 27,4; 30,19
displacement of stars near, 27,17
Eclipse in January 55 Years Ago, *J. Hugh Pruett,* 27,3
eclipse, Jan. 25, 1944, Mexican expedition, 26,2; (ill.), 27,15; 27,22; Eclipse Report, An, *R. Stuempfle,* 29,3; (ill.), 31,1; Mexican Eclipse Expedition, *Felix Recillas J.,* 31,8; times of totality, 31,9; 33,6
eclipse, annular, July 20, 1944, 33,21
equation of time, see Time
negative ions, 35,13
prominences, Mount Wilson classification, 25,11
solar cycle and weather, 28,9
solar flare, 29,14
Sun and Eclipses, The, *Marian Lockwood,* 32,12
sunspots, (ill.), 35,24; and cosmic rays, 34,8; and radio, 29,14; and Royal Astronomical Society, 29,14
Sunspots in Review, *Walter G. Bowerman,* 35,8
Telluric Oxygen Bands, The, *Keivin Burns,* 30,8
Sussman, Lester, Exploring the Heavens With a 2-Inch Telescope, 34,11
Swann, W. F., 34,12
Swann, W. F. G., The Nature of Cosmic Rays, I, 31,3; II, 32,7; III, 33,8; IV, 34,6

T

Tarantula (Great Loop) nebula, 36,2; (ill.), 36,24
Taurus, 27,5
Taylor, Loraze B., and *Frank K. Edmondson,* American Astronomers Meet, 26,10
Telescope making—Efficient But Low-cost Telescope Drive, An, *J. Hugh Pruett,* 32,18
Eyepiece Problem, The, *Earle B. Brown,* 28,18; correction, 31,17
Foucault test, 35,18
Foucault Test for a Schwarzschild, *R. B. Korsmeyer,* 29,18
Gleanings for A.T.M.s, all issues
Improved Pitch Lap, An, *Allyn J. Thompson,* 33,18; (ill.), 33,1
Metal Mirrors, *G. H. Lutz,* 25,18
photocell mirror test, 35,18
prism in a Newtonian, 35,18
revolving mirror section, 35,18
Rotating Telescope Mount, *Max H. Mattes,* 25,18
Schupmann telescope, 35,18
Schwarzschild Telescope, The, *Earle B. Brown,* 27,18; correction, 28,19
Simple Setting Circles for Amateur Telescopes, *J. Hugh Pruett,* 34,16
see also Telescopes
Telescopes—and the Clarks, 34,17
Cassegrainian (Blacklock arrangement), 31,9
Haute Provence reflector, 31,9; 33,7
Improving the Reflector, *Earle B. Brown,* 30,18; 31,16
law of diminishing returns, 28,5
Notes on Mountings, *Earle B. Brown,* 26,16
number of stars visually and photographically, 35,19
proposed Soviet telescopes, 32,19
Testing the Focal Lengths of Telescopic Oculars, *J. Hugh Pruett,* 36,16
Warner and Swasey objective prism, 32,11
see also Telescope making
Telluric Oxygen Bands, The, *Keivin Burns,* 30,8
Texas Meteor Cloud, May 20, 1944, *Oscar E. Monnig,* 35,3; (ill.), 35,1
Thales of Miletus, 29,11
Thompson, Allyn J., An Improved Pitch Lap, 33,18
Three-body problem, 34,10
Time and timekeeping—accurate time signals, 27,2
"Arnold," 32,19
astronomy in the army, 26,20
equation of time, 26,23; 30,21; 32,20
sidereal time in the sky, 36,12
Titan's atmosphere, 29,15
Titus, John, 28,10
Trainer for Celestial Navigation, A, *Harry LeVine,* 36,5
Trigonometric parallax, see Stellar parallax
Tuberg, Merle, 29,15
Tycho Brahe, 31,14

U

Ulugh Bey, 31,14
Uranus—positions (current), 27,23
see also Planets
Ursa Major, 30,3
Ursa Minor, 30,4
U.S.S.R.—proposed telescopes, 32,19

V

Van Biesbroeck, G., 29,15
Van Biesbroeck, G., Comet van Gent-Peltier, 28,11
van de Kamp, Peter, 26,11; 32,14; 35,15
van de Kamp, Peter, The Galactocentric System, 32,3

van Maanen, Adriaan, 36,8
Variable stars—AR Herculis, 28,10
Cepheid variables, 36,11; 36,13; pulsation theory, 27,11
cluster Cepheids, 35,12
Delta Cephei, 28,7
see also Stars
Vega, 33,13
Velocity of light, see Light
Venus—atmosphere, 29,4
brightness, 30,2
"Flu from Venus?" 31,15
see also Planets
Virgo, twin spiral in (ill.), 29,1
Volcano, see Paricutin
Vulcan, 27,4
Vyssotsky, A. N., 26,11

W

Warner and Swasey objective prism, 32,11
Washburn Observatory, 31,11
Wates, Cyril G., 35,7
Weather, see Meteorology
Weaver, Harold F., book review, 36,14
Wendt, Gerald, 28,14
Wildt, Rupert, 35,13
Wilson, Latimer J., Seasonal Changes on Mars, 28,15
Witherell, Percy W., Man and His Expanding Universe, I, 26,14; II, 27,15; III, 28,20; IV, 29,11; V, 30,11; VI, 31,14; VII, 32,11; VIII, 33,15; IX, 34,22; X, 35,21; XI, 36,11
Spectra, V, 25,15
Wood, H. E., The Observation of the Minor Planets, 33,4
Woolard, Edgar W., book review, 26,18
Wren, Sir Christopher, astronomer, 30,6

X

X-rays, see Atomic particles

Y

Yale catalogue, 35,14
Yoke type telescope mounting, 26,17
Yowell, Everett I., One Hundred Years at the Cincinnati Observatory, 26,3

Z

Zeeman, Pieter, 26,9; correction, 27,11

INDEX TO ADVERTISERS

Addison-Wesley Press, Inc., 31,20; 33,17
Baehr, William B., 32,18
Blakiston Company, The, 25,16; 26,18; 27,16; 28,16; 29,16; 30,14; 31,18; 32,16
Book Corner, The, 27,17; 29,19; 30,18; 31,20; 32,17; 33,17; 34,15; 35,17; 36,14
Cyr, Donald Lee, 30,15; 31,19
Ecnareves Press, 34,15
Fecker, J. W., 26,17; 27,19; 28,18
Ginn and Company, 29,17
Houghton Mifflin Company, 30,15
K&T Scientific Drawing Co., 25,19
Longines Wittnauer Watch Co., Inc., 25,2; 26,2; 30,2; 31,2; 32,2; 36,2
Macmillan Company, The, 25,16; 26,18; 30,14; 31,18; 32,16; 35,17; 36,14
Marshall, Roy K., 30,15; 31,19; 33,17; 34,15; 35,17; 36,14
Mayflor Products Corp., 31,16; 32,18; 33,18; 34,16; 35,18; 36,17
McGraw-Hill Book Company, Inc., 26,19; 28,17; 29,17; 30,16; 31,19; 32,17; 33,16; 34,14; 35,16; 36,15
Optical Coating Laboratory, 35,19; 36,17
Perkin-Elmer Corporation, The, 25,18; 26,16; 30,23; 32,23; 34,23; 36,23
Philosophical Library, 30,15
Precision Optical Supply Co., 25,19; 26,17; 27,18; 28,18; 29,18; 30,18; 31,16; 32,18; 33,18; 34,16; 35,18; 36,16
Rasmussen, 25,19; 26,17; 27,18; 28,18; 29,18; 30,18; 31,16
Rasmussen & Reece, 32,18; 33,18; 34,16; 35,18; 36,17
Reinhold Publishing Corp., 31,19
Ross, Harry, 25,19; 26,17; 27,19; 28,19; 29,18; 30,18; 31,16; 32,18; 33,18; 34,16; 35,19; 36,16; 36,19
Scientific American, 27,18
Scientific Monthly, The, 25,17; 26,14
Sky and Telescope, 25,14; 26,15
Smith & Durrell, Inc., 26,19; 28,17
Spickler, Charles A., 35,19
Telescope, The, 25,17; 26,14; 27,17; 29,20
Valley View Observatory, 25,19; 26,17; 27,18; 32,18; 34,16; 36,16
Waeldin, 31,16; 33,18; 35,19
Yale University Observatory, 25,17